

Patent claims:

1. A polynucleotide comprising:
 - 5 a) the sequence as depicted in SEQ ID NO:1 or 3; or
 - b) a polynucleotide which exhibits an identity of more than 50% with the polynucleotide having the sequence depicted in SEQ ID NO:1 or 3; or
 - 10 c) a polynucleotide which hybridizes, under stringent conditions, with the polynucleotide having the sequence as depicted in SEQ ID NO:1 or 3; or
 - d) 15 a polynucleotide which encodes a polypeptide having the sequence depicted in SEQ ID NO:2; or
 - e) a polynucleotide which exhibits an identity of more than 50% with a polynucleotide which encodes the polypeptide having the sequence depicted in SEQ ID NO:2; or
 - 20 f) a polynucleotide which hybridizes, under stringent conditions, with a polynucleotide which encodes the polypeptide having the sequence depicted in SEQ ID NO:2; or
 - 25 g) a polynucleotide which differs from a polynucleotide having the sequence depicted in SEQ ID NO:1 due to the degeneracy of the genetic code;
 - h) 30 a polynucleotide which is a fragment of a polynucleotide as described in a) to g) and is at least 6 nucleotides in length.

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2. A polypeptide which is encoded by a polynucleotide as claimed in claim 1 and is at least 8 amino acids in length.
3. A vector or expression system which contains at least one of the polynucleotides as claimed in claim 1.
4. A host cell which harbors the vector or the expression system as claimed in claim 3.
5. A method for preparing a polypeptide as claimed in claim 2 using a host cell as claimed in claim 4.
6. An antibody, characterized in that it specifically binds to the polypeptide as claimed in claim 2.
7. The use of antibodies as claimed in claim 6 as parasiticides.
8. A method for detecting a polynucleotide as claimed in claim 1, wherein a polynucleotide as claimed in claim 1 is hybridized with the nucleic acid material from a biological sample and the hybridization is detected.
9. The method as claimed in claim 8, wherein the hybridization is detected using the polymerase chain reaction.
10. A method for detecting a polypeptide as claimed in claim 2, wherein the polypeptide is detected by the binding of the antibody as claimed in claim 6.
11. A composition for detecting a polynucleotide as claimed in claim 1 or a polypeptide as claimed in claim 2, which comprises a polynucleotide as claimed in claim 1 or an antibody as claimed in claim 6.

12. The use of a (an):
- a) polynucleotide as claimed in claim 1; or
 - b) polypeptide as claimed in claim 2; or
 - c) vector or expression system as claimed in claim 3; or
 - d) antibody as claimed in claim 6
- for producing a vaccine.
13. A vaccine comprising:
- a) a polypeptide as claimed in claim 2; or
 - b) a vector as claimed in claim 3; or
 - c) an antibody as claimed in claim 6.
14. A method for finding active compounds which modulate the activity of the *EtOS22* protein during the excystation of sporozoites from sporocysts, in which:
- a) the active compound to be tested is brought into contact with an *EtOS22* polypeptide as claimed in claim 2, with the selected conditions enabling the test substance to bind specifically to the *EtOS22* polypeptide; and
 - b) a specific binding to the polypeptide which has taken place is detected;
- with an active compound which binds to the polypeptide being identified as a potential active compound for treating coccidiosis.
15. A method for finding active compounds which modulate the activity of the *EtOS22* protein during the excystation of sporozoites from sporocysts, in which:
- a) the active compound to be tested is brought into contact with an *EtOS22* polypeptide as claimed in claim 2, with the selected

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conditions enabling the test substance to bind specifically to the *ErOS22* polypeptide; and

- b) the modulation of the activity of the polypeptide as claimed in claim 2, or of the *ErOS22* protein, is detected;

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with an active compound which modulates the activity being identified as a potential active compound for treating coccidiosis.

16. An active compound which can be found using one of the methods as claimed in claim 14 or 15.
17. An active compound which modulates the activity of the *ErOS22* protein during the excystation of sporozoites from sporocysts.
18. A pharmaceutical composition which comprises the active compound as claimed in claim 16 or 17 and a pharmaceutically admissible excipient.
19. The use of an active compound which modulates the activity of the *ErOS22* protein during the excystation of sporozoites from sporocysts for producing a drug for treating coccidiosis.

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